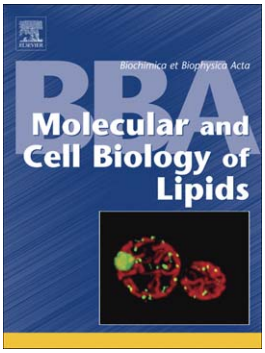

New insights into cellular cholesterol acquisition: Promoter analysis of human *HMGCR* and *SQLE*, two key control enzymes in cholesterol synthesis

Vicky Howe, Laura J. Sharpe, Anika V. Prabhu, Andrew J. Brown

PII: S1388-1981(17)30057-4
DOI: doi:10.1016/j.bbalip.2017.03.009
Reference: BBAMCB 58132

To appear in: *BBA - Molecular and Cell Biology of Lipids*

Received date: 21 February 2017
Accepted date: 22 March 2017

Please cite this article as: Vicky Howe, Laura J. Sharpe, Anika V. Prabhu, Andrew J. Brown, New insights into cellular cholesterol acquisition: Promoter analysis of human *HMGCR* and *SQLE*, two key control enzymes in cholesterol synthesis, *BBA - Molecular and Cell Biology of Lipids* (2017), doi:10.1016/j.bbalip.2017.03.009

New insights into cellular cholesterol acquisition: promoter analysis of human *HMGCR* and *SQLE*, two key control enzymes in cholesterol synthesis

Vicky Howe, Laura J. Sharpe, Anika V. Prabhu, Andrew J. Brown

School of Biotechnology and Biomolecular Sciences, The University of New South Wales, Sydney, Australia

*Running title: Transcriptional regulation of human *HMGCR* and *SQLE*

To whom correspondence should be addressed: Andrew J. Brown, School of Biotechnology and Biomolecular Sciences, Biological Sciences Building D26, The University of New South Wales, Sydney, NSW 2052, Australia. Tel: +61-2-9385-2029; E-mail: aj.brown@unsw.edu.au

Highlights

- We found that human *HMGCR* and *SQLE* promoters both possess two closely-spaced SREs
- We identified a novel NF-Y site in the human *HMGCR* promoter
- We found two NF-Y sites in the human *SQLE* promoter, which are conserved with mouse
- We show a previous study incorrectly identified an SRE in the human *SQLE* promoter
- *HMGCR* is only activated by high SREBP-2 levels, when cholesterol is truly needed